

WHAT IS CLAIMED IS:

1. A cleaning device comprising:
a cleaning member contactable to a moving
image bearing member to clean a surface of the image
5 bearing member;
holding means for holding said cleaning
member;
vibrating means which is vibratable;
wherein said holding means this movable
10 toward and away from said image bearing member, and
wherein said vibrating means is supported on
said holding means.
2. A device according to Claim 1, wherein said
15 vibrating means includes driving means for rotating a
shaft of vibrating means and a weight mounted to
mounting said shaft of vibrating means such as to
provide a position of a gravity center defeated from a
center of rotation of said shaft of vibrating means.
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3. A device according to Claim 2, wherein said
vibrating means includes a cover accommodating said
driving means and said weight.
- 25 4. A device according to Claim 1, wherein a
plurality of such vibrating means are arranged in a
direction perpendicular to a moving direction of the

surface of said image bearing member.

5 5. A device according to Claim 4, wherein said
vibrating means are positioned substantially at
symmetric positions with respect to a center of a
length measured in the perpendicular direction.

10 6. A device according to Claim 1, wherein said
holding means is swingable about a rotational axis of
holding means directed perpendicularly to a moving
direction of said image bearing member and about a
substantial center of a length of said holding means
measured in a direction perpendicular to a moving
direction of said image bearing member.

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 7. A device according to Claim 2, wherein said
holding means is swingable about a rotational axis of
holding means directed perpendicularly to a moving
direction of said image bearing member, and said shaft
20 of vibrating means extends substantially parallel with
a rotational axis of holding means.

 8. A device according to Claim 7, wherein a
plurality of such vibrating means are arranged in a
25 direction perpendicular to a moving direction of said
image bearing member in said holding means, and
rotational directions of shafts of at least two

vibrating means are different from each other.

9. A device according to Claim 1, wherein said
cleaning member has an impact resilience which is not
5 less than 10% and not more than 40%.

10, a device according to Claim 9, wherein
said cleaning member is made of urethane elastomer.

11. A device according to Claim 9, wherein said
10 impact resilience is values measured at a temperature
of said cleaning member when said apparatus is used.

12. A device according to Claim 1, wherein said
cleaning member is detachably mountable to said
15 holding means.

13. An image forming apparatus comprising:
a movable image bearing member;
image forming means for forming an image on
20 said image bearing member;
a cleaning member contacted to said image
bearing member to clean a surface of said image
bearing member;
holding means for holding said cleaning
25 member;
vibrating means which is vibratable;
wherein said holding means this movable

toward and away from said image bearing member, and
wherein said vibrating means is supported on
said holding means.

5 14. A device according to Claim 13, wherein said
vibrating means includes driving means for rotating a
shaft of vibrating means and a weight mounted to
mounting said shaft of vibrating means such as to
provide a position of a gravity center defeated from a
10 center of rotation of said shaft of vibrating means.

15 15. A device according to Claim 14, wherein said
vibrating means includes a cover accommodating said
driving means and said weight.

16. A device according to Claim 13, wherein a
plurality of such vibrating means are arranged in a
direction perpendicular to a moving direction of the
surface of said image bearing member.

20 17. A device according to Claim 16, wherein 5. A
device according to Claim 4, wherein said vibrating
means are positioned substantially at symmetric
positions with respect to a center of a length
25 measured in the perpendicular direction.

1-8. A device according to Claim 13, wherein
said holding means is swingable about a rotational

axis of holding means directed perpendicularly to a
moving direction of said image bearing member and
about a substantial center of a length of said holding
means measured in a direction perpendicular to a
5 moving direction of said image bearing member.

19. A device according to Claim 14, wherein said
holding means is swingable about a rotational axis of
holding means directed perpendicularly to a moving
10 direction of said image bearing member, and said shaft
of vibrating means extends substantially parallel with
a rotational axis of holding means.

20. A device according to Claim 19, wherein a
15 plurality of such vibrating means are arranged in a
direction perpendicular to a moving direction of said
image bearing member in said holding means, and
rotational directions of shafts of at least two
vibrating means are different from each other.

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21. A device according to Claim 13, wherein said
cleaning member has an impact resilience which is not
less than 10% and not more than 40%.

25 22. A device according to Claim 21, wherein said
cleaning member is made of urethane elastomer.

23, a device according to Claim 21, wherein

said impact resilience is values measured at a temperature of said cleaning member when said apparatus is used.

5 24. A device according to Claim 23, further comprising heating means for temperature control for said image bearing member in a range not lower than 30°C and not higher than 49°C.

10 25. A device according to Claim 13, wherein said cleaning member is detachably mountable to said holding means.

15 26. A device according to Claim 13, wherein said vibrating means is operated when no image forming operation is carried out.

20 27. A device according to Claim 26, wherein said vibrating means operates when said image bearing member not rotating.